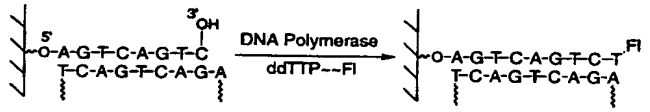

Figure 1. The APEX reaction: Extension of a surface-bound primer strand occurs by hybridization to a template strand in solution, recognition of this primer–template complex by a DNA polymerase, and the addition of a labeled terminating nucleotide triphosphate. When primers are arrayed on the surface, the method permits parallel analysis of many single-nucleotide sites in analyte DNA.

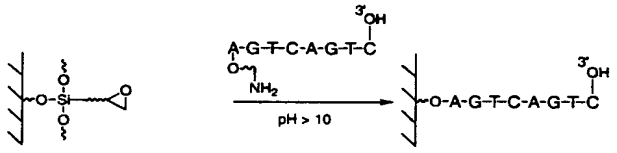

Figure 2. Conventional chemistry for immobilization of amine-derivatized oligonucleotides on epoxysilane-functionalized surfaces.

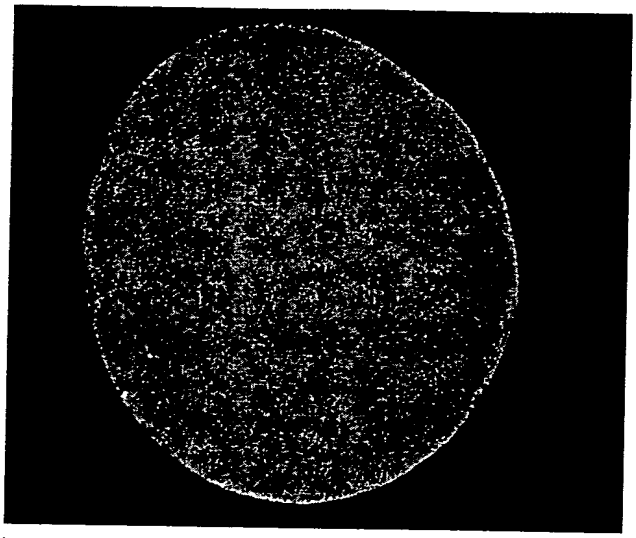

Figure 3. Confocal fluorescence micrograph of oligonucleotide **3** spotted on a slide functionalized with silane **A** and subjected to APEX with template **7**. The average fluorescence intensity across the spot is 88, while the average fluorescence intensity in the nearby dark region is 3.5. The mean diameter of the spot is 200 μm.

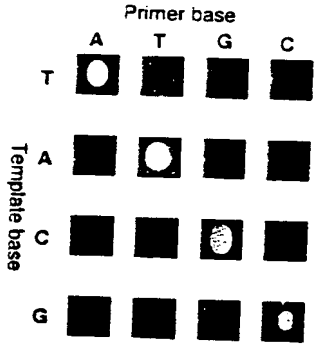

Figure 4